HABRANTHUS TUBISPATHUS (LILIACEAE) NEW TO THE FLORA OF ALABAMA

The Copper Lily *Habranthus tubispathus* (L'Her.) Traub was first collected in Alabama in the northeast part of the city of Troy in Pike County on 15 July 1988 during field work for a Flora of Pike County. This species was then collected in the community of China Grove in the northern part of Pike County on 17 July 1995 and in rural western Bullock County near the area referred to as High Ridge on 12 July 1996. A fourth site southwest of the city of Troy in Pike County was discovered in August of 1997 (Fig. 1). These are the first records of this species from Alabama, and the second record of this species in North America outside of Texas and Louisiana according to Holmes and Wells (1980) and Burkhalter (1984).

Habranthus tubispathus (L'Her.) Traub (Liliaceae), also known as *Zephyranthes texana* Herbert or *Habranthus texanus* (Herbert) Herbert ex Steud., is a scapose perennial from a small bulb. Each 10–20 cm scape bears a single yellowish-orange flower produced during the summer months, usually following a rain. The leaves are linear, 3–5 mm wide and up to 25 cm in length, and appear in autumn and wither by early spring. The fruit is ovoid and three lobed containing numerous flat, black papery seed at maturity. The genus *Habranthus* is separated from the genus *Zephyranthes* by Sealy (1937) based upon the filaments of *Habranthus* being of four lengths and the anthers affixed at the middle, while in *Zephyranthes* the filaments are of alternate lengths and the anthers affixed below the middle.

In the city of Troy, Copper Lily is found growing in lawns, along side walks, in a city softball field, a grass parking lot, and a cemetery. All of the sites are to some degree disturbed and other vegetation consists primarily of mixed grasses (predominately *Cynodon dactylon* (L.) Pers., *Paspalum notatum* Fluegge, and *Eremochloa ophiuroides* (Munro) Hack.) and other bulb species (*Ipheion uniflorum* (Lindley) Raf., *Allium bivalve* (L.) Kuntze, and *Allium canadense* L.). Copper Lily is so abundant there that in some lawns it forms a complete ground cover when in foliage. The soils are sandy and well drained. Flowering of Copper Lily is most common in July, August, and September, when periods of drought are broken by summer thunder showers. The foliage appears in late autumn, usually in October, and remains green throughout the winter. The total area occupied by Copper Lily in Troy is about three to five acres, and extends in a unbroken population for 276 meters along Three Notch Street.

In China Grove and in the High Ridge area Copper Lily is found on roadsides and in lawns. It is associated with many of the same species as the population in Troy, with *Cynodon dactylon* (L.) Pers. and *Paspalum notatum* Fluegge

FIG. 1. Map of Alabama with locations of Pike and Bullock counties.

predominating. The soils in China Grove and in High Ridge are coarse sands and the sites tend to be xeric. Undisturbed areas nearby support a dwarf oak-lichen sandhill community. The population in China Grove extends for 301 meters along Pike County Highway 37 and the High Ridge population extends for 142 meters along Bullock County Highways 7 and 14. Estimates of total population size are three acres for China Grove and two acres for High Ridge.

The fourth population is located about eight miles southwest of Troy near Goshen. It is also found on a roadside and extends for 75 m along Pike County Highway 25. The soil is sandy and the main associate at this site is *Paspalum notatum* Fluegge. This is the smallest population, covering approximately one-half acre.

Monitoring of a planted population of copper lily for five years revealed that the seed generally fell within 15 cm of the parent plant and that seed-

lings were readily produced. Seedlings generally flowered for the first time in their third year of growth without special care.

Holmes and Wells (1980) reinforced the suggestion of H.H. Hume (Sealey 1937) that the distribution of Copper Lily in North America was the result of human activity. They speculated that the distribution of the Copper Lily in North America was most likely the result of traveling Spanish missionaries as all of the Texas and Louisiana populations are near the sites of Spanish missions. As there is no record of a Spanish mission ever having been located in Troy or in Pike county, it is most likely that the species reached Alabama by other means. Historical records of the Troy-Pike county area reveal that in 1865 a man by the name of William Murphree left Troy and moved to Walker County, Texas. In letters to his mother, Murphree states that he is enclosing seeds for her to plant. In other records Mrs. Murphree is noted for planting many of the decorative plants in Troy at that time. The Murphrees lived on Three Notch Street in Troy, the site of the largest Copper Lily population reported above. Walker County, Texas, where Mr. Murphree moved is listed by Holmes and Wells as a place where Copper Lily was collected (1980). We therefore speculate that Copper Lily was introduced into Alabama by the Murphree family from populations in Walker County, Texas. As all of the sites reported above are old communities, it is likely that Mrs. Murphree shared the plant with friends or relatives nearby.

Voucher specimens: **ALABAMA**: **Bullock Co.**: T13N R21–22E sect. 36–31, intersection of Bullock Co. Hwy 7 and 14 and un-numbered dirt road, high ridge, roadsides and lawns, full sun, deep dry sandy soil, abundant, 12 Jul 1996, *A.R. Diamond 10413* (AUA). **Pike Co.**: T10N R21E sect. 29, Troy, U.S. Hwy 29 (Three Notch Street), north of down town at Knox Field, abundant along sidewalks and road, lawns, and vacant lots, full sun, sand or clay soil, flowered after shower during drought, no leaves seen, 15 Jul 1988, *A.R. Diamond 5210* (AUA); T12N R21E sect. 9, China Grove, just east of Pike Co. Hwy 7, roadside, full sun, dry sandy soil, common, 17 Jul 1995, *A.R. Diamond 9691* (AUA); T9N R20E sect. 6, Pike County Hwy 25, 0.2 mi S of U.S. Hwy 29, ca. 75 m along the west side of the road, full sun, flowers yellow, 3 Oct 1997, *A.R. Diamond 11131* (AUA).

Duplicates will be distributed at a later date.—*Alvin R. Diamond, Jr., Charles P. Chapman, and Jim Brummett, Department of Biology, Troy State University, Troy, AL 36082, U.S.A.*

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